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A few spider mites in soybeans

Marlin E. Rice
Iowa State University, merice@iastate.edu

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A few spider mites in soybeans

by Marlin E. Rice, Department of Entomology

The weather in Iowa over the next several weeks will determine whether spider mites escalate to damaging levels or not. If the temperatures are cooler than normal, then spider mites would not be expected to be a problem in soybeans; however, there are a few reports of spider mites in eastern Iowa where soil moisture is adequate, and in one field, spider mites are being found under irrigation. Normally, it is the hotter than normal temperatures in late July and August, coupled with a soil moisture deficit, that stresses the plants and creates good conditions for spider mites.

A soybean field damaged by spider mites along the field edge. (Marlin E. Rice)

High temperatures in the 90s and low 100s typically prompt questions about how spider mites will affect soybeans. Many of us still remember the drought of 1988 and the millions of acres that were sprayed to control spider mites. Spider mites typically flourish in hot, dry weather because the fungal pathogens that suppress spider mites during high humidity and mild temperatures are less effective against mites during very dry and hot weather.

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Before any soybean field is sprayed with an insecticide for spider mites, the field should meet three conditions. First, live spider mites should be present. Check for spider mites by knocking the upper soybean leaves against a piece of white paper or a paper plate.

If very tiny, dark spots crawl around on the paper, then you have live mites. Second, leaves must have "stippling" or small yellow spots. This is an indication of feeding by spider mites. Third, very dry or drought conditions are currently being experienced or they are forecasted in the next week. Spider mite populations typically increase when soybeans are under drought stress.

Twospotted spider mite (Marlin E. Rice)

An additional consideration before spider mites are sprayed is the choice of insecticide. Numerous insecticides are labeled for soybeans, but the pyrethroids (Asana XL®, Baythroid®, Pounce®, and Warrior®) sometimes make spider mite problems worse by eliminating all the beneficial insects while not killing all the spider mites. The result can be a "flaring" of spider mite populations, or an increase in the spider mite population, after the application. In other words, the miticide application "backfires," making the problem worse. Spider mites are best controlled in soybeans by using an organophosphate (dimethoate or Lorsban®, or its generic equivalent).

Marlin E. Rice is professor of entomology with extension and research responsibilities in field and forage crops.

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